WHAT IS CLAIMED IS:

1. A method for forming a semiconductor device comprising the steps of:

depositing a monoatomic film including a metal on a base by using a metal source including a compound containing said metal and no oxygen;

depositing a metal oxide film including oxide of said metal on said monoatomic film by using a CVD technique.

2. The method according to claim 1, further comprising, before said monoatomic film depositing step, the step of supplying oxidizing gas onto a surface of said base.

3. The method according to claim 2, wherein said oxidizing gas includes heated H_2O.

4. The method according to claim 2, wherein said oxidizing gas includes at least one gas selected from the group consisting of O_2, active oxygen, ozone, and N_2O.

5. The method according to claim 1, further comprising, before said monoatomic film depositing step, the step of supplying hydrofluoric acid onto a surface of said base.

6. The method according to claim 1, wherein said metal source includes at least one said compound selected from the group consisting of $TaCl_5$, TaF_5, and $Ta(N(C_2H_5)_2)_3$, and said metal oxide film is tantalum oxide.

7. The method according to claim 1, wherein said metal source includes $Al(CH_3)_3$, and said metal oxide is titanium oxide.

8. The method according to claim 1, wherein said metal source includes $TiCl_4$ or $Ti(N(CH_3)_2)_4$ and said metal oxide is titanium oxide.

9. The method according to claim 1, wherein said metal source includes at least one said compound selected from the group consisting of $Hf(NCH_3)_2)_4$, $Hf(N(C_2H_5)(CH_3))_4$ and $Hf(C_2H_5)_2)_4$, and said metal oxide is hafnium oxide.

10. The method according to claim 1, wherein said metal source includes at least one said compound selected from the group consisting of $NbCl_5$, NbF_5 and $Nb(N(C_2H_5)_2)_3$, and said metal oxide is niobium oxide.

11. The method according to claim 1, further comprising, between said monoatomic film depositing step and said metal oxide film depositing step, the step of supplying oxidizing gas onto

a surface of said monoatomic film.

12. The method according to claim 12, wherein said base is either silicon substrate, polysilicon film, silicon nitride film or a metallic film.

13. The method according to claim 1, further comprising the step of forming a conductive film on said metal oxide film, wherein said steps are used for forming a capacitor including said base as a bottom electrode, said metal oxide film as a capacitor insulation film, and said conductive film as a top electrode.